CASH CONVERSION CYCLE AND PROFITABILITY FOOD AND BEVERAGE COMPANIES IN INDONESIA

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Abstract : One measure used to measure the efficiency of working capital is Cash Conversion Cycle (CCC). The cash conversion cycle is a cycle that describes the length of time it takes a company to convert inventory and receivables into cash and pay debts. The lower the cash conversion cycle, the better. This study aims to analyze the relationship between the cash conversion cycle and profitability. The samples in this study were 17 food and beverage companies listed on the Indonesia Stock Exchange for the 2018 to 2022. This research found that there is a negative relationship between the cash conversion cycle and profitability as measured by Return on Assets and Return on Equity. The shorter the inventory conversion period and the receivables collection period and the longer the debt repayment period, the less cash conversion cycle can be. Reduced or lower cash conversion cycles indicate that the company has been able to optimize the use of its working capital so as to increase profitability.
Keywords : Cash conversion cycle; Profitability; Return on assets; Return on equity.

INTRODUCTION

Components of working capital (cash, accounts receivable, inventories, and debt) are part of the goal of maximizing shareholder value by company management. The financial metrics calculated are critical to business operations and involve contracts with suppliers (accounts payable), raw material inventory, work in process inventory, and finished goods inventory, and end customers (accounts receivable). These working capital measures all deal with the same process and are highly correlated with each other, and correlate with the size of the Cash Conversion Cycle (Cash Conversion Cycle, hereinafter referred to as CCC) (Boisjoly, Conine Jr., & McDonald IV, 2020)

One of several metrics used to measure how well management is using working capital is to use the CCC. Working capital is money used in day-to-day operations. This metric measures the amount of time it takes a company to convert money invested in operations into cash (Mueller, 2022).

CCC is one of several quantitative measures that help evaluate the efficiency of a company's operations and management. A downward trend or a stable CCC value over several periods is a good sign, while an increase needs to be further analyzed based on other factors (Hayes, 2022). CCC is the cycle period in which the company turns cash into inventory and accounts payable to purchase inventory and back into cash by collecting receivables from sales. CCC shows how quickly a company can generate more cash from existing cash (Chen, Choy & Tan, 2022).

The CCC period will vary widely between different industries meaning there is no single number that represents a 'good' or 'bad' cash conversion cycle. However, it is useful to make a comparison of the CCC of two companies in the same industry, because a lower CCC may indicate that one company is managing its working capital more effectively than the other. It is also useful to calculate the CCC of each company over time, as this can show whether the business is running efficiently (taulia.com).

CCC is an important tool influencing the short term needs of a company. CCC affects the liquidity requirements of every company, every nature of business, and every business size (Marisetty and Madasu, 2020). Managers make decisions to manage working capital by creating a balance between available current assets and current liabilities. In addition, financial

managers can reduce the risk of future cash shortages and bankruptcy by managing CCC well (Panigrahi, 2013).

CCC as a whole can have an impact on a company's profitability. Shorter CCC means higher profit margins. This means that the time lag between spending on purchasing supplies and services provided to consumers and collecting revenue from those services has decreased. Also means that working capital is managed more effectively. Managers can increase profitability by reducing the length of CCC (Upadhyay & Smith, 2015).

Jariya Research (2019),Rahmantika & Juliarto (2020), and Chang (2022) analyzed the relationship between CCC and profitability, and found that there was a negative relationship between CCC and profitability. According to Chang (2022), these results support that aggressive working capital policies can improve company performance but this effect is reduced or reversed when the company is at a lower CCC level.

Research by Zakari and Saidu (2006) and Panigrahi (2013) found that CCC has a positive relationship with profitability. This is because CCC has a high negative value. the company is not under pressure to reduce the receivables collection period and inventory sales period and extend the time for paying debts to increase profitability.

Research by Agustin & Suryani (2022) and Aryawan & Indriani (2020) found that CCC has no relationship to profitability. CCC has a fairly high standard deviation value. This indicates that there is a considerable distance or a large difference between companies with high CCC and companies with low CCC in influencing company profitability (Agustin & Suryani, 2022). Manufacturing companies in Indonesia have short cash conversion cycles but have little effect on increasing profitability (Aryawan & Indriani, 2020).

Based on the findings above, empirical studies regarding the relationship between CCC and company profitability have produced mixed results, making it interesting to study.

METHODS

This study basically tries to examine the relationship between the cash conversion cycle (CCC) and profitability. Profitability is measured by 2 ratios namely Return on Assets and Return on Equity. This study used a sample of 17 food and beverage sub-sector companies listed on the Indonesia Stock Exchange for the period 2018 to 2022 (total sample = 85). Below is a list of sample companies.

Table 1. List of Sample Companies

No.	Code	Company name
1.	AISA	Tiga Pilar Sejahtera Food Tbk
2.	ALTO	Tri Banyan Tirta Tbk
3.	CAMP	Campina Ice Cream Industry Tbk
4.	CHECK	Wilmar Cahaya Indonesia Tbk
5.	CLEO	Sariguna Primatirta Tbk
6.	DLTA	Delta Djakarta Tbk
7.	HOCKEY	Buyung Poetra Sembada Tbk
8.	ICBP	Indofood CBP Sukses Makmur Tbk
9.	INDF	Indofood Sukses Makmur Tbk
10.	MLBI	Multi Bintang Indonesia Tbk
11.	MYOR	Mayora Indah Tbk
12.	PSDN	Prasidha Aneka Niaga Tbk

No.	Code	Company name
13.	BREAD	Nippon Indosari Corpindo Tbk
14.	SKBM	Sekar Bumi Tbk
15.	SKLT	Sekar Laut Tbk
16.	STTP	Siantar Top Tbk
17.	ULTJ	Ultra Jaya Milk Industry & Trading Company Tbk

Source: processed data (2023)

The basic model for testing this relationship can be stated as follows:

ROA = α + β1 CCC+ ei ……...(1)

ROE = α + β1 CCC+ ei ……....(2)

Information :

ROA = Return on Assets (ROA)

ROE = Return on Equity(ROE)

CCC = Cash Conversion Cycle

RESULTS AND DISCUSSION

Descriptive statistics

Table 2. Descriptive Statistics

Variable	Minimum	Maximum	Means	std. Deviation
DIO	17	401	77.2625	69.48055
DSO	22	110	48.0239	19.95360
DPO	1	118	39.6974	27.40583
CCC	-16.57	431.67	85.6445	72.66006
ROA	-7	62,1	10.9234118	11.60882008
ROE	-8.02	141.78	18.2387059	23.89674474

Source: processed data (2023)

Some explanations regarding descriptive statistical tests are described as follows.

1. Outstanding Inventory Days (DIO) has a minimum value of 17 days, a maximum value of 401, and an average value of 77 days with a standard deviation of 69.48. DIO is the average number of days a company holds its inventory before selling it which shows how quickly the company can turn inventory into cash. It is a liquidity metric and also an indicator of a company's operational and financial efficiency. A smaller DSI value is preferred which means that the company is more efficient and the inventory turnover is fast so that it can produce higher profitability. A large DSI value indicates that there is a lot of unsold inventory. This high level of inventory can mean that the company is anticipating high demand or speculating in the future.

2. Days Sales Outstanding(DSO) has a minimum value of 22 days, a maximum value of 110, and an average value of 48 days with a standard deviation of 19.95. DSO is the average number of days it takes a company to collect payment for sales (accounts receivable). A high DSO value indicates that the company is experiencing delays in receivables payments, which can result in cash flow problems. A low DSO indicates that the company is getting paid quickly.

3. *Days Payable Outstanding* (DPO) has a minimum value of 1 day, a maximum value of 118, and an average value of 40 days with a standard deviation of 27.41. DPO is the average number of days it takes a company to pay bills (debt) to creditors. A higher DPO value means that the company takes longer to pay off its debts. In the period before the debt is paid, the company can use these funds to maximize profits. However, a high DPO can also indicate a company's inability to pay its debts.

4. *The Cash Conversion Cycle (CCC)* has a minimum value of -16 days, a maximum value of 432, and an average value of 86 days with a standard deviation of 72.67. CCC is the length of time it takes a company to convert its investment in working capital into cash. The lower the CCC, the better.

5. *Return on Assets-ROA has* a minimum value of -7%, a maximum value of 62%, and an average value of 11% with a standard deviation of 11.61. ROA is a ratio that measures a company's ability to generate profits by using its assets. The higher the ROA the better because it means the company is more efficient in using its assets.

6. *Return on Equity-ROE has* a minimum value of -8%, a maximum value of 142%, and an average value of 18% with a standard deviation of 23.90. ROE is a ratio that measures a company's ability to generate profits using its equity. The higher the ROE, the more efficient the company's management is in generating a return on its equity.

Correlation of CCC and Profitability

Table 3. Correlation Results

		CCC	ROA	ROE
CCC	*Pearson Correlation*	1	-0.240	-0.236
	Sig.		0.027	0.030
ROA	*Pearson Correlation*	-0.240	1	0.900
	Sig.	0.027		0.000
ROE	*Pearson Correlation*	-0.236	0.900	1
	Sig.	0.030	0.000	

Source: processed data (2023)

This study found that CCC has a negative and significant relationship to the two profitability ratios, namely ROA and ROE.

Parameter Estimation and Linear Regression Model

Table 4. Parameter Estimation of the Linear Regression Model

Model	Coefficient		R	R2	Sig
	α	β			
ROA = α + βCCC+ ei	21.104	-2,492	0.240	0.057	0.027
ROE = α + β CCC + ei	38,862	-5,048	0.236	0.056	0.03

Source: processed data (2023)

In the first model of this research ROA = α + β CCC + ei obtained a constant value of 21.104 stating that if the independent variable (CCC-CCC Cycle) is considered constant, then ROA is 21.104%. The CCC regression coefficient of -2.492 states that for every one unit (1 day) increase in CCC, ROA will decrease by 2.492%. The coefficient of determination (R Square) of

5.7% means that 5.7% of the distribution of the dependent variable (ROA) can be explained by the independent variable (CCC).

In the first model of this research ROE = α + β CCC + ei obtained a constant value of 38.862 stating that if the independent variable (CCC-CCC Cycle) is considered constant, then ROE is 38.862%. The CCC regression coefficient of -5.048 states that for every one unit (1 day) increase in CCC, ROE will decrease by 5.048%. The coefficient of determination (R Square) of 5.6% means that 5.6% of the distribution of the dependent variable (ROE) can be explained by the independent variable (CCC).

RESULTS AND DISCUSSION

This research supports the research results of Linh & Mohanlingam (2016), Al-Mohareb (2019), Pandeirot, Sumanti & Aseng (2023), and Karim, Mamun & Kamruzzaman (2023). Linh & Mohanlingam (2016) found that CCC has a significant negative relationship with profitability (Return on Equity and Return on Assets). The shorter the cash conversion time, the higher the profits made by agricultural and food companies in Thailand. Al Mohareb (2019) claims that CCC has a negative and significant effect on the profitability of manufacturing sector companies in Jordan. These findings indicate that the shorter the company's inventory period and the shorter the receivables period, the higher the company's profitability. Karim, Mamun & Kamruzzaman (2023) stated that the longer the CCC, the worse the profitability of the company. His research claims that minimizing the number of days to turn inventory into finished goods, shortening days for accounts receivable collection and lengthening accounts payable days reduces CCC and management can boost the finances of manufacturing companies in Bangladesh.

CCC is part of cash management and is considered an important factor in improving company performance, which shows how efficient a company is in paying bills and collecting its receivables (Zakari and Saidu, 2006). CCC is an important aspect of every manufacturing company because it helps management to see how long the amount of cash is held in the operating cycle from purchasing raw materials to supplying sales. CCC is a very effective instrument to see how well a company manages its working capital so that the company can reduce the risk of cash shortages and bankruptcy. Manufacturing companies are required to be able to estimate and evaluate business cash flows to identify cash inflows and cash outflows to prevent cash shortages (Saraswati & Bernawati, 2020).

This study proves that there is a significant negative relationship between CCC and profitability as measured by ROA and ROE. The shorter the cash conversion cycle, the higher the profitability. The shorter inventory conversion period and the receivables collection period and the longer the debt repayment period, the less cash conversion cycle. Reduced or lower cash conversion cycles indicate that the company has been able to optimize the use of its working capital to increase profitability.

CONCLUSION

CCC has a significant negative relationship with profitability. The shorter the cash conversion cycle, the higher the profitability. The inventory conversion period, the receivables collection period, and the debt payment period which are components in the CCC calculation have a major influence on company profitability in food and beverage companies in Indonesia.

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